

CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

IEC Electronics Analysis & Testing Laboratory (IATL) 1430 Mission Avenue Albuquerque, NM 87107

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field(s) of

TESTING

Refer to the accompanying Scope(s) of Accreditation for information regarding the types of tests to which this accreditation applies.

AT-1572

Certificate Number

ANAB Approval

Certificate Valid: 01/11/2016-10/12/2017 Version No. 002 Issued: 01/11/2016



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory guality management system (*refer to joint ISO-ILAC-IAF Communiqué dated January 2009*).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

IEC Electronics Analysis & Testing Laboratory (IATL)

1430 Mission Ave., Albuquerque, NM 87107 Mark Northrup Phone: 315-332-4283 mnorthrup@iec-electronics.com/services/analysis-testing-lab

TESTING

Valid to: October 12, 2017

Certificate Number: AT - 1572

| FIELD OF TEST | ITEMS, MATERIALS OR PRODUCTS TESTED | SPECIFIC TESTS OR PROPERTIES MEASURED | SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED | *KEY EQUIPMENT OR TECHNOLOGY |
|----------------------------------|---|--|---|--|
| Non-Destructive Testing (NDT) | Electrical, Electronic and Electromechanical (EEE) Components | Elemental content by XRF, EDS (Lead, tin, etc.) | JESD213 | Fischerscope XDAL |
| Non-Destructive Testing (NDT) | Electrical, Electronic and Electromechanical (EEE) Components | Elemental thickness XRF (ENIG) | IPC-4552 | Fischerscope XDAL |
| Non-Destructive Testing (NDT) | Electrical, Electronic and Electromechanical (EEE) Components | Radiographic Examination / Inspection | MIL-STD-883, Method 2012 MIL-STD-750, Method 2076 MIL-STD-202, Method 209 | Nordson Dage XD7600NT Ruby |
| Non-Destructive Testing (NDT) | Electrical, Electronic and Electromechanical (EEE) Components | Acoustic Microscopy (CSAM) Examination / Inspection | IPC/JEDEC J-STD-035 | Sonix Echo |
| Mechanical | Electrical, Electronic and Electromechanical (EEE) Components | SEM Examination / Inspection | MIL-STD-750, Method 2077 MIL-STD-883, Method 2018 | Hitachi S-4800 |
| Mechanical | Electrical, Electronic and Electromechanical (EEE) Components | Internal Examination / Inspection | MIL-STD-883, Method 2010 and 2013 MIL-STD-750 Method 2072 | Olympus BX50 Keyence VHX- 2000E |
| Mechanical | Electrical, Electronic and Electromechanical (EEE) Components | Particle Impact Noise Detection (PIND) | MIL-STD-883, Method 2020 MIL-STD-750, Method 2052 | Spectral Dynamics PTI Model: 4511 1 |
| Mechanical | Electrical, Electronic and Electromechanical (EEE) Components | Die Shear Grams of Force | MIL-STD-883, Method 2019 MIL-STD-750, Method 2017 | Dage 4000 |



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|--------------------------------|--|---|---|--|
| Environmental | Electrical, Electronic and Electromechanical (EEE) Components | Fine Leak Testing Leak Rate | MIL-STD-883, Method 1014; MIL-STD-750, Method 1071; MIL-STD-202, Method 112 | Alcatel ASM 142 |
| Environmental | Electrical, Electronic and Electromechanical (EEE) Components | Gross Leak Testing Examination / Inspection | MIL-STD-883, Method 1014; MIL-STD-750, Method 1071; MIL-STD-202, Method 112 | Web Technologies 6000 Bubble Tester |
| Environmental | Electrical, Electronic and Electromechanical (EEE) Components | Exposure / Temperature Cycling | MIL-STD-883, Method 1010; MIL-STD-750, Method 1051; | Tenney JR T-Shock Chamber |
| Failure Analysis | Electrical, Electronic and Electromechanical (EEE) Components | Curve Trace | MIL-STD-883, Method 5003 | JD Instruments ATE Tektronix 370 |
| Failure Analysis | Polymers, Non-volatile Residue, Material Electrical, Electronic and Electromechanical (EEE) Components | Material Characterization | ASTM E 334 | Nicolet 6700 Analytical FTIR Spectrometer and Continuum IR Microscope |
| Thermal Analysis Techniques | Polymers, Non-volatile Residue, Material Electrical, Electronic and Electromechanical (EEE) Components | Thermogravimetric Analysis (TGA) | ASTM E1131 | TA Instruments Q50 Thermogravimetric Analyzer TGA |

Notes:

1. 2. * = As Applicable

This scope is formatted as part of a single document including the Certificate of Accreditation No. AT-1572

Vice President

